

IN THE CLAIMS:

Please add new claims 105 -107, and amend the claims as follows:

1-18. (Canceled)

19. (Currently Amended) A substrate processing apparatus, comprising:
a fluid impermeable evaporation shield having a plenum coupled to a low partial pressure source and adapted to be positioned over a substrate positioned on a substrate support, the fluid impermeable evaporation shield having a fluid retaining surface adapted to form a gap with respect to the substrate, wherein the thickness of the gap is between about 0.5 millimeters and about 4 millimeters.

20. (Previously Presented) The apparatus of claim 19, wherein the fluid impermeable evaporation shield is sized to have an outer diameter that is greater than or equal to an outer diameter of the substrate.

21. (Canceled)

22. (Previously Presented) The apparatus of claim 19, wherein the gap is adapted to be filled with a fluid layer.

23. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield further comprises at least one port to deliver a fluid to form the fluid layer.

24. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield further comprises at least one port to reclaim a fluid on the substrate.

25. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield further comprises at least one port to deliver a fluid to form the fluid layer and to reclaim the fluid on the substrate.

26. (Canceled)

27. (Previously Presented) The apparatus of claim 19, wherein the fluid impermeable evaporation shield comprises a degassing membrane.

28-31. (Canceled)

32. (Previously Presented) A substrate processing apparatus, comprising:
an evaporation shield having an outer diameter that is greater than or equal to an outer diameter of a substrate positioned on a substrate support member, the evaporation shield having a substantially planar lower surface adapted to form a gap with respect to the substrate, wherein the gap is adapted to be filled with a fluid layer, and

a transducer coupled to the evaporation shield to provide acoustic waves to the fluid layer.

33. (Original) The apparatus of claim 32, wherein the transducer is disposed against the evaporation shield.

34. (Original) The apparatus of claim 32, wherein the transducer comprises a rod which is adapted to contact the fluid layer.

35. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield further comprises a seal adapted to contact the substrate support.

36. (Previously Presented) The apparatus of claim 22, wherein the substrate support further comprises a seal adapted to contact the fluid impermeable evaporation shield.

37. (Canceled)

38. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield further comprises fluid agitation components selected from the group consisting of channels, veins, and protrusions, the fluid agitation components being disposed on a lower surface of the fluid impermeable evaporation shield.

39. (Previously Presented) The apparatus of claim 19, wherein the fluid impermeable evaporation shield comprises a material selected from the group consisting of polymers, ceramics, quartz, and coated metals.

40. (Previously Presented) The apparatus of claim 19, wherein the fluid impermeable evaporation shield comprises a polymer material.

41-95. (Canceled)

96. (Currently Amended) A substrate processing apparatus, comprising:
a moveable evaporation shield adapted to be positioned over a substrate contacting a substrate support, the moveable evaporation shield comprising a degassing membrane and in communication with a plenum in communication with a low partial pressure source ~~the degassing membrane~~.

97. (Previously Presented) The apparatus of claim 96, wherein the moveable evaporation shield further comprises a plenum port coupled to the plenum.

98. (Previously Presented) A substrate processing apparatus, comprising:

an evaporation shield adapted to be positioned over a substrate disposed on a substrate support, the evaporation shield comprising a degassing membrane and a plenum in communication with the degassing membrane; and
a vacuum source coupled to the plenum.

99. (Previously Presented) A substrate processing apparatus, comprising:
an evaporation shield adapted to be positioned over a substrate disposed on a substrate support, the evaporation shield comprising a degassing membrane and a plenum in communication with the degassing membrane; and
a low partial pressure source coupled to the plenum.
100. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield is adapted to provide heat to the fluid layer.
101. (Previously Presented) The apparatus of claim 22, wherein the fluid impermeable evaporation shield is adapted to rotate.
102. (Previously Presented) The apparatus of claim 96, wherein the moveable evaporation shield is adapted to be vertically moveable.
103. (Previously Presented) The apparatus of claim 19, wherein the fluid impermeable evaporation shield is adapted to be vertically moveable.
104. (Previously Presented) The apparatus of claim 32, wherein the evaporation shield is adapted to be vertically moveable.
105. (New) The apparatus of claim 27, wherein the degassing membrane is in communication with the fluid retaining surface and the plenum.
106. (New) The apparatus of claim 19, wherein the low partial pressure source contains a low partial pressure of a defined gas.

107. (New) The apparatus of claim 19, wherein the low partial pressure source is a vacuum.